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SCHOOL ENVIRONMENT AS A DETERMINANT OF ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOLS IN SOKOTO STATE, NIGERIA

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ABSTRACT

This paper investigates the significant and the core relationship between the school environment and academic achievement in the secondary schools, The method used involved the estimation of regression models and subsequent analysis of results using conventional statistics. The results of the study were reported using numerical and graphic techniques to report descriptive statistics (e.g., means, frequencies, percentages, and standard deviation, etc.). Graphs and tables were used to present the findings. Descriptive statistical comparisons and analyses were used to show the relationship of variables in the study. The dependent variables of student achievement and rate were compared to those sections and subsections of questionnaire that measures school facilities. The dependent variable of school climate and school culture was compared to those sections and subsections of the OCDQ-RS questionnaire that measured school climate and school culture and school facilities. One-way Analysis of variance and the Multiple Regression Analysis were the statistical tools used to test the hypotheses. The findings indicate that positive and significant relationships existed between the school environment as a facilities and academic achievement as a performance of the secondary students. Thus, academic achievement correlate and depend on the school facilities, in the research hypothesis 1, the results shows an effects that school facilities determine the student performance. From research hypothesis 2 of this study it also revealed that there is significant relationship between school management and teachers task performance with the performance of the students, teacher quality also determine the potency of the knowledge that the student could acquired in a given period of lesson or in the classroom. This calls for educational reviews on school facilities and resources to create advancement for post primary education in the nation.

Key words: Educational infrastructure, deteriorating schools, student motivation, cognitive

INTRODUCTION

In Nigeria, secondary education is the passageway to higher education hence; secondary schools serve as the major source of recruitment into higher institutions of learning. Therefore, the Joint Matriculation Examination (which is the qualifying examination for entrance into the University, Polytechnics, Monotechnics and Colleges of education) in Nigeria and the School Certificate Examination have been the instrument and criteria by which performance of student and quality of students are measured. Nevertheless, the main objectives of the secondary education in Nigeria as contained in the National Policy of Education are as follows;

- To develop the personal capacity of individuals to be useful within the society
- To inspire students with a desire for self improvement and achievement of excellence
- To prepare pupils and promote student for the next stage of education.

The response has been that the concept of life-long loaming and the idea that there is not just one transition from education work; instead the two systems are seen as parallel entities and individuals can expect to interact with both through the course of their work life. Coombs (1969) remarked that secondary school supplies the person who with one or more years training institution or on the job becomes the labour force of a nation. However, our educational systems (secondary schools inclusive) have failed in the areas of character moulding, morals, behaviour and academic output. Various stories abound of students and young people's vices of vandalization, robbery, pick pocketing, thuggery etc. Furthermore, as

reported by Obemeata (1995) numerous studies have shown that there has been a sharp decline in the academic performance of various levels of our educational system in Nigeria, and the decline has been attributed largely to the poor condition in educational institutions in the country. Worse still there has been an upsurge in the number of both community and privately owned secondary schools, accompanied with a gross lack of modern instructional technologies, poor physical classroom condition and lack of adequate training programme for teachers. The issue of quality in education goes beyond the curriculum or subject content but includes learning environment and school factors. It is the view of Obayan (2003) and Obameata (1998) that classroom learning environment and school factors exerts some dominant influence on learner's achievement. Since man is a product of his environment. According to Lawani (2000) cited Berger (1966), "Society has been conceived as extent, reality that exerts pressure and coercion upon the individual". Most at times we desire just what the society expects us, we want to obey the rules, and we want to play the parts that society has assigned to us. In essence, society not only determines what we do but also what we are. This implies that there is a natural tendency in human beings to seek societal approval and praise in whatever they do, and the societal approval reinforces and ensures further conformity. The agencies which are mainly responsible for the socialization process are the home, the school, the peer group, the mass media and the community, which are referred to as the environment in this research. It is worthy of note that these sub-systems of the society have either positive or negative effect on the student output quality. Since student output is a product of his environment the basic assumption of this study are:-

1. That the school and it environment is a key factor in development of the personality and means of socialization.
2. Those schools are capable of building disciplined society by inculcating desirable habits and morals in students.
3. That the performance functioning and dysfunction of the school system depend largely on the management environment of the school. The implication here is that the school should be capable of shaping student. It then should be expected that if the schools properly shapes students' output or behaviour, delinquency and other vices in the society will be reduced considerably and academic quality will be improved. Influencing the behaviour, attitudes and academic quality of student that pass through educational facilities, in all cases, there are descriptions of widespread neglect compared to several African countries, the teacher: pupil ratios in Nigeria are favourable, despite wide variations between states and local government, and presumably between schools. A greater problem appears to be the very inadequate physical conditions under which most children study and the lack of educational materials.

Statement of the Problem

The menace of vices, abysmal of school environment, poor academic output and poor performance at work in the society has been a source of concern to all the stakeholders in education i.e. government, teachers, parents, religious bodies, law environment agents and society at large. The society cannot exist without making mention of the school which is the major agent of change. It is based on the above premise that the study sought to examine the notable impact (if any) of environment on academic performance of secondary school students in Sokoto state, Nigeria.

Purpose of the Study

1. To examine the influential factors of academic achievement in the selected secondary schools in sokoto state; focusing on the school environment as the determinant
2. To survey the classroom physical proviso and the management administering the entire surrounding influences relating to the cognitive performance of the pupils in secondary school education and considering teaching materials, technical equipments and facilities to the educational performance in the secondary school
3. To examine the impacts of environmental management on students quality output in selected secondary schools in the northern region
4. To focus on the environmental education, recourses for educators and the systematic relationship between the qualities, causes and effects of the environment on the academic index

of inward performance generally on the students and the impetrative of their teachers.

5. Purposefully, to scrutinize carefully the awareness and sensitivity, the knowledge and understanding, attitudes concern for the school environment and to maintain environmental quality and challenges serving as the determinant of achievement toward the pupils of the secondary schools.

Research Design and Methodology

This study is a descriptive research and hence adopted "ex post facto" research method. This method was adopted because information gathered described the relationship between school environment and students output quality. However, the studies do attempt to establish cause, effect relations and to determine the significance of relationship

Population

This was a survey, and the populations for the study were all principals' teachers, students and parents in Yabo Local Government, sokoto State. A sample of 250 persons participated in the study.

Population Sample

250 respondents were selected for this study. This comprise 1 principal, 20 teachers, 21 parents and 8 final year students (i.e. senior secondary certificate student) each from 5 secondary schools (Junior Secondary School, Yabo, Community Day Secondary School, Yabo, Government Science Secondary School, Yabo, Junior Secondary School, Kilgori and Government Science Secondary School, Sayinna.) that have been presenting candidates for Secondary School Certificate Examination for a minimum of 10years (1994-2012). The sample was randomly drawn from the population.

Instrumentation for Data Collection

School Environment and Students Academic Achievement Questionnaire was used for data collection. This is to test the extent the school environment influence students output quality based on the teachers performance of apportion task. In all, 250 questionnaires were distributed, completed and 230 were returned. Hence, 220 questionnaires were analyzed as each questionnaire containing 50 question items. The questionnaire adopted the 4-point Likert type summation scale weight. The responses obtained were assigned numerical values and by summing up an individual's responses to all the statement a total score was obtained which help in determining that respondent stand on the variable or attribute being measured.

Methods of Data of Collection

Based on research and review of literature, questionnaires were used to collect data. Gall et al. (2007) asserted that the use of questionnaires was appropriate in providing valid assessment of variables to be studied. O'Neill (2000) (as cited in McGowen, 2007) contended that there are several advantages of using questionnaires in research (a) the questionnaire was an efficient way of reaching a wide range of the population, (b) the questionnaire was less expensive, and (c) the stimuli provided to the participants in the study were consistent and opportunities for uncensored responses are greater

Validity of Instrument

A preliminary-test or test retest was conducted on the questionnaires and necessary adjustment made on it before it was finally administered on the sample population.

Method of Data Analysis

Descriptive statistics was used to analyze the data. Data were collected using basic research methodology that was described in Education Research: an Introduction (Gall et al., 2007). Analysis results came from basic statistical methods that were described and outlined in Statistical Methods for Psychology (Howell, 2006). The results from the questionnaires, School Environment and Students Achievement performance Quality Questionnaire **(SESAPQ)** and the Organizational Climate Description Questionnaire for Secondary Schools **(OCDQ-RS)** were entered into a Microsoft Excel spreadsheet. The Statistical Package for the Social Sciences (SPSS) for Windows© Version 7.0 ultimate were used to code, score, and analyze the

data to produce numerical and graphical results for this research study. The SPSS provided a broad range of capabilities for this research study. The results of the study were reported using numerical and graphic techniques to report descriptive statistics (e.g., means, frequencies, percentages, and standard deviation, etc.). Graphs and tables were used to present the findings. Descriptive statistical comparisons and analyses were used to show the relationship of variables in the study. The dependent variables of student achievement and rate were compared to those sections and subsections of questionnaire that measures school facilities. The dependent variable of school climate and school culture was compared to those sections and subsections of the OCDQ-RS questionnaire that measured school climate and school culture and school facilities. One-way Analysis of variance and the Multiple Regression Analysis were the statistical tools used to test the hypotheses at 0.05 levels of significances.

Limitation of the Study:

The study is limited to Sokoto State, Nigeria.

The Research Hypotheses of the Study are;

1. There is no significant change in the student attitude toward their ability to acquire good results in the final secondary school certificate examination (SSCE), depending on the school facilities in selected secondary school in Sokoto State
2. There is no significant relationship between school management environment and teachers task performance with the performance of the students
3. There is significant relationship between teachers experience and students academics performance
4. School facilities have significant effect on academic performance of secondary school students

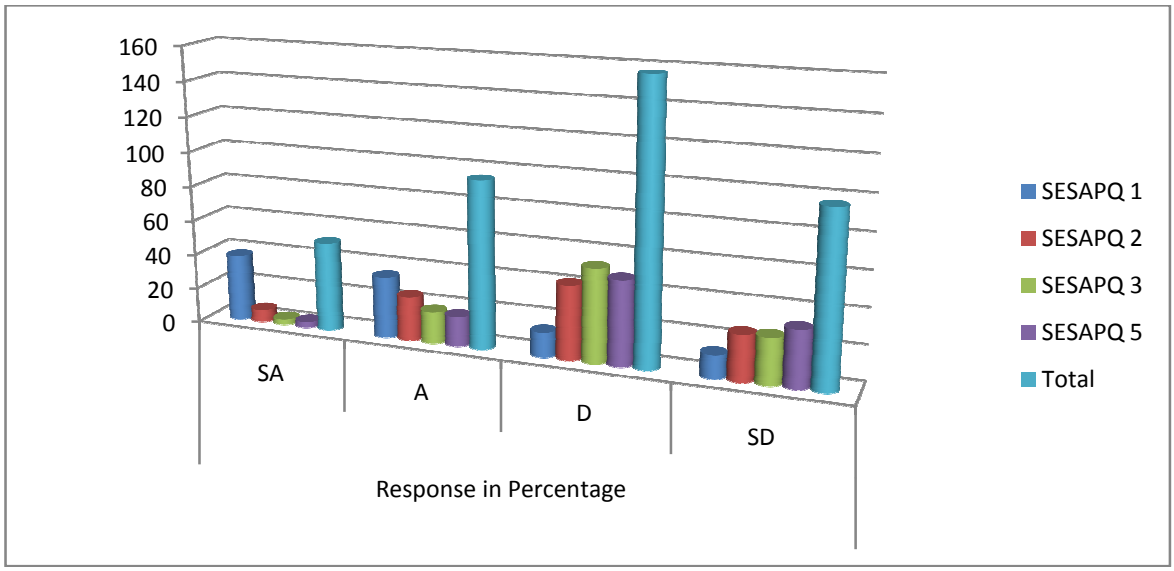
Interpretation of Hypothesis 1

Question	Response in Percentage				Means (x)		Coefficient of Correlation(r)	Remark
Items	SA	A	D	SD	SA+A	D+SD		
SESAPQ 1	38	35	14	13	(x)	(y)		Significant
SESAPQ 2	7	25	42	26			0.61	
SESAPQ 3	3	18	53	26	18.15	31.75		
SESAPQ 5	3	17	48	32				

*** r = Pearson Correlation Coefficient 0.61**
*** Level of Significant at 0.085(a)**

The above results are the responses from items 1, 2, 3 and 5 in the questionnaire, which was aimed at producing answers to hypothesis 1. The result shows that 63%, 32% 21%and 20% of the respondent, respectively agreed while 27%, 68%, 79% and 80% disagreed with the assumption that There is no significant change in the student's attitude towards their ability to acquire good result in the final secondary school certificate examination (SSCE), depending on the school facilities in selected secondary school in sokoto state. The implication of this result is that if there is no adequate school facility, the ability to acquire good result in their final secondary school examination (SSCE) will not be possible and visible. The correlation of coefficient is 0.61, which shows that the relationship is negative, weak and not significant. The hypothesis 1 is hereby rejected.

Bar Chart Graph



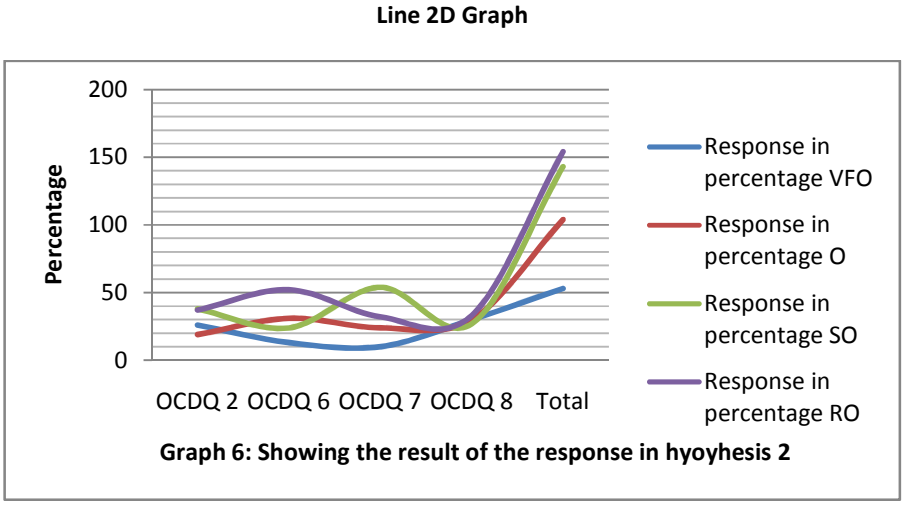
Graph 5: Showing the result form hypothesis 1

Interpretation of Hypothesis 2

Question	Response in Percentage				Means (x)		Coefficient of Correlation(r)	Remark
Items	VFO	O	SO	RO	VFO+O	SO+RO		
OCDQ 2	26	19	38	37	(x)	(y)		Significant
OCDQ 6	13	31	24	52	22.89	37.13	0.50	
OCDQ 7	10	24	54	32				
OCDQ 10	30	30	27	33				

* r = Pearson Correlation Coefficient 0.50
* Level of Significant at 0.085(a)

Questions 2, 6, 7 and 10 analyzed provide answer to hypothesis 2 and from the findings shown above, 62.5%, 63.3%, 71.7% and 50% of the respondents for sometimes occur, disagreed profoundly with the hypotheses, there is no significant relationship between school management and teachers task performance with the performance of the students, while 37.5%, 36.7%, 28.3% and 50% are often occurs supports that there is significant relationship between them. The correlation coefficient is 0.50, which is that the relationship is negative, weak and significant shows that there is a relationship between teacher performance and student academic achievement. Therefore, the tested hypothesis 2 should be rejected.



Graph 6: Showing the result of the response in hyoyhesis 2

Result of Hypothesis 3

There is significant relationship between teachers experience and student academic performance

Correlations

		Years of Experience	Pupils are trusted to work together without supervision
Years of Experience	Pearson Correlation	1	-.022
	Sig. (2-tailed)		.811
	N	120	120
Pupils are trusted to work together without supervision	Pearson Correlation	-.022	1
	Sig. (2-tailed)	.811	
	N	120	120

** Correlation is significant at level of 0.085 (2-tailed)

The number of case (N = 120) is correct with the table labeled correlation. The direction of the variables are negative (r -0.22), indicating a negative correlation between year of experience and performance of the students, determining the strength of the relationship, the output of the values of Pearson – moment correlation which indicated the strength of the relationship between the variables, therefore, correlation value of -0.22 indicate a perfect small negative correlation between the teacher experience and student academic performance. The correlation coefficient -0.22 squared (-0.22x -0.22= 0.0484x100= 4.84%) determines 4.84 percent of shared variance. (r= -0.22, N= 120, p<0.005). That is, years of teacher experience does not really affect the student academic performance, this result shown very small level of correlation between the tested variables.

Result of Hypothesis 4

School facilities have significant effect on academic performance of secondary school students. The internal consistency of the scales that was used for this research is being tested for reliability; reliability analysis method was used to check the reliability of the scales.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.086	.118	4

Item Statistics

	Mean	Std. Deviation	N
8.Equipment and furniture (such as shelving units, tables and chairs) appropriate size for the buildings student population	1.98	.752	100
10. The school facilities accommodate a variety of learning styles of student.	1.91	.780	100
12. Does your school have adequate resources in library with academic materials?	2.15	.925	100
26. Library/Resource/Media center provide appropriate space occupies a space of a minimum of 2100 sq.ft. and acts as an instructional lab	1.61	.790	100

Item-Total Statistics

Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
SESAPQ 8	5.67	1.819	.223	.059	-.222(a)
SESAPQ 10	5.74	2.033	.088	.048	-.009(a)
SESAPQ 12	5.50	2.212	-.084	.036	.281
SESAPQ 26	6.04	2.261	-.021	.037	.154

Reliability coefficients
No of Cases = 100
No of Items= 4
Alpha = 0.86

The internal consistency of the scales is reliable, in the current study of the research the Cronbach alpha reported is 0.86, which is above the minimum value of 0.70.

ANOVA (b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.991	4	.498	2.114	.085(a)
	Residual	22.369	95	.235		
	Total	24.360	99			

a Predictors: (Constant)
b Dependent Variable: Gender
c. Predictors (Constant); SESAPQ 8, SESAPQ 10, SESAPQ 12, SESAPQ 26

Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta	Tolerance	VIF	B	Std. Error
1	(Constant)	1.402	.227		6.171	.000		
	SESAPQ 8	-.161	.067	-.244	-2.403	.018	.941	1.063
	SESAPQ 10	.126	.064	.198	1.966	.052	.952	1.050
	SESAPQ 12	.006	.054	.012	.119	.905	.964	1.037
	SESAPQ 26	.051	.063	.081	.807	.422	.963	1.039

a Dependent Variable: Gender

The items SESAPQ 8 shows the standardized coefficient Beta of .244 which is the strongest among the variables that contributes uniquely towards the performance of the students in secondary schools, therefore the effect of SESAPQ 8(Equipment and furniture (such as shelving units, tables and chairs) appropriate size for the buildings student population) have significant effect on academic performance of the students. The hypothesis is hereby accepted.

Discussion

The study revealed that there is significant relationship between the educational facilities and the academic achievement of the students. Academic achievement correlate and depend on the school facilities, in the research hypothesis 1, the results shows an effects that school facilities determine the student performance. From research hypothesis 2 of this study it also revealed that there is significant relationship between school management and teachers task performance with the performance of the students, teacher quality also determine the potency of the knowledge that the student could acquired in a given period of lesson or in the classroom. There was strong disagreement to the used research hypothesis, which indicates that the school facilities, considered important to the academic achievement. The study also found that there is significant relationship between teachers experience and student academic performance, Teachers experience will enhance competency in discharging their academic duties. The result of which will be a positive reflection to students output quality. This result supports the hypotheses which are positive to the study and the correlation is 0.22 as indicated from the statistics. Finally, it was a submission that student cannot adequately achieve excellent performance without putting in place appropriate and standard school facilities to signified development of basic and post primary education in Nigeria. During the discussion on this research Oluyide (2012), concluded that “Education is the most powerful weapon which we can use to change the world” hence, it needs to be equipped and a total contribution by Aruwaji. (2012), that facility is the main bedrock of every successful academic achievement in all length of education.

Recommendations

Based on the research conducted and findings, the following recommendations are stipulated:

1. The government should increase the education budget allocation for availability of funds to procure adequate and finite facilities for the schools to be able to meet up with the minimum standard as mandatory in the national policy on education.
2. Workshops, seminars and conferences should be organized for teachers to enable them prepare and develop themselves towards improving the academic achievement of their students.
3. Teachers should be encouraged and motivated to acquire higher qualifications.
4. Government should continue to motivate teachers to stay on their job.
5. The school should link with society, agencies and other private organization to generate funds, and promote and establish investment to supports and develop the academic process.
6. The educational sector should encourage Intensive Corporation between the management, teachers and the students in terms of interpersonal relationships towards academic achievement.

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